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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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BEYER WEAVER & THOMAS LLP P.O. BOX 778 BERKELEY, CA 94704-0778				
			EXAMINER KOSTAK, VICTOR R	
			ART UNIT	PAPER NUMBER
			2614	

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/068,573	Applicant(s) NELSON ET AL.	
	Examiner Victor R. Kostak	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-11, 15-26 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 12-14 and 27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/29/02</u> . | 6) <input type="checkbox"/> Other: ____. |

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1. Claims 8 and 20-30 are objected to because of the following informalities: in claim 8 line 3 and in claims 20 and 24 in line 7, "stiradian" should be changed to "steradian". Appropriate correction is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24-26 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bawolek et al.

The system of Bawolek (noting particularly Figs. 3-5, 7 and 8) involves capturing images of a low-light intensity light source (i.e. LED array 14) with a camera 18, wherein included is an imaging box (chamber) 12 formed of a spherical wall (flatter walls having been obvious to one of ordinary skill in the art since the exact shape of the chamber is inconsequential to the imaging of the light source). The calibration device being the LED array positioned within the chamber and is powered and controlled by computer 20 and which controls imager 18. The camera receives light from the array and the camera is calibrated by comparing acquired light with a reference (e.g. Fig. 4, 5).

Although Bawolek does not specify the light range of the LEDs, it would have been obvious to one of ordinary skill in the art to use standard low-level LEDs for such calibration that are characterized by the light range as given, and as recognized by applicant (noting page 7 of the specification), thereby meeting claim 24.

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As for claims 25 and 26, photographic and luminescent imagery is generated by the camera under the control of computer 20 (further indicated by Fig. 9 depicting image charts).

As for claim 28, it would have been obvious to one of ordinary skill in the art to maintain imaging for a length of time adequate to determine the soundness of the calibration system per its components.

Regarding claim 29, it would have been obvious to carry out the calibration for a minimal amount of time capable of providing adequate results, or extended to any time considered adequate to apprise the system integrity as so desired by the operator, thereby providing acceptable overall analysis.

3. Claims 1-6, 9, 11, 15-17, 19, 20, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bawolek et al. in view of Sugiura et al.

As explained above, Bawolek involves capturing images of a low-light intensity light source (i.e. LED array 14) with a camera 18, wherein included is an imaging box (chamber) 12 formed of a spherical wall (flatter walls having been obvious to one of ordinary skill in the art since the exact shape of the chamber is inconsequential to the imaging of the light source). The calibration device being the LED array positioned within the chamber and is powered and controlled by computer 20 and which controls imager 18. The camera receives light from the array and the camera is calibrated by comparing acquired light with a reference (e.g. Fig. 4, 5).

Although Bawolek does not specify the light range of the LEDs, it would have been obvious to one of ordinary skill in the art to use standard low-level LEDs for such calibration

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that are characterized by the light range as given, and as recognized by applicant (noting page 7 of the specification).

It would also have been obvious to one of ordinary skill in the art to include an interface as shown by Sugiura (e.g. element 10 in Fig. 16), who in his camera calibration system modifies the light source in order to provide alternate and additional modes of measurement for calibration, in the system of Bawolek, for that reason. The LED array of Bawolek would accordingly include the interface thereby comprising the light source used for camera calibration, thereby meeting claims 1 and 2.

As for claim 11, five LEDs are used.

As for claim 20, the LEDs are inherently include a voltage supply or they would not be operative (Bawolek does not discuss that inherent feature, instead mentioning control by the computer). The computer also carries out the calibration process based on the camera data and reference data used for comparison.

Regarding claim 3, it would have been obvious to provide a constant light or changed intensity depending on the calibration or measurement data desired to be obtained.

As for claim 4, it would accordingly have been obvious to ensure constancy of the LEDs (if that mode is desired), such as by providing self-monitoring (or regulated) diodes. (Bawolek points out that his LEDs are high-stability devices: col. 4 lines 23-25).

As for claim 5, as explained above, in order to maintain a constant light intensity, regulated power would have been obvious to include, such as by a standard voltage regulator.

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Considering claim 6, filter 10 or diffuser 13 of Sugiura serves as a diaphragm having an opacity, and hole 2 in alignment therewith, to provide the imager with optical data, in the modified system of Bawolek.

As for claim 9, voltage shut-off is inherent in both Bawolek and Sugiura as neither system is designed to run continuously or infinitely.

As for claims 15 and 22, Sugiura includes a light diffuser 13 (section [0110]) between the LED 4 and the emission through hole 2, used to create a distribution of light to be detected by the scanner.

Regarding claim 16, Bawolek includes red and green light supplies as RGB calibration is carried out (noting, e.g., Fig. 4).

Considering claims 17 and 23, Sugiura alternatively provides a neutral density filter 10 (section [0089]) which attenuates light from the LED and positioned between the LED 4 and the emission through hole 2.

As for claim 19, it would have been obvious to calibrate the system components to as an accurate measure as possible (accuracy being a typical consideration in calibration determination), such as by incorporating absolute units or by carrying out measurements to as specific a decimal place as possible.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bawolek and Sugiura in further view of Nieto Velasco et al.

It would have been obvious to one of ordinary skill in the art to provide the operator with an indication of the progress or completion of any stage in the calibration process, such as by

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giving an audible or visual indication, as taught by Nieto Velasco (noting elements 4a – 4d in Fig. 1), who also discloses a closed chamber with a scanner for carrying out fine measurements.

5. Claims 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bawolek and Sugiura in further view of Ramm et al.

It would also have been obvious to one of ordinary skill in the art to ensure that the chamber of Bawolek is light-tight with regarding the scanner 18, as taught by Ramm (section [0090]) in his low-light level scanner, which would accordingly provide the scanner exclusively with known light and not tainted with external light.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Claims 7, 8, 12-14 and 27 appear allowable over the prior art.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is 703 305-4374. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 308-HELP.



Victor R. Kostak
Primary Examiner
Art Unit 2614

VRK